

## PATENT COOPERATION TREATY

## PCT

13 Rec'd PCT/PTO 11 OCT 2000  
 INTERNATIONAL SEARCH REPORT 09/673133

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>1038-938 MIS</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/CA 99/ 00307</b>	International filing date (day/month/year) <b>12/04/1999</b>	(Earliest) Priority Date (day/month/year) <b>14/04/1998</b>
Applicant  <b>CONNAUGHT LABORATORIES LIMITED et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/CA 99/00307

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 9  
because they relate to subject matter not required to be searched by this Authority, namely:  
Remark: Although claim 9  
is directed to a method of treatment of the human/animal  
body, the search has been carried out and based on the alleged  
effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such  
an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all  
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment  
of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report  
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is  
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 99/00307

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 6 C07K14/79 C07K14/22 C12N15/31 C12Q1/68 A61K39/02 A61K48/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 6 C12N		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 32980 A (CONNAUGHT LAB ) 12 September 1997 (1997-09-12) page 3, line 29 -page 9, line 32 page 19, line 32 -page 30, line 6; examples 1-19 SEQ.ID.N.3 ---	1-12
A	WO 97 13785 A (CONNAUGHT LAB ;YANG YAN PING (CA); MYERS LISA E (CA); HARKNESS ROB) 17 April 1997 (1997-04-17) page 1, line 1 -page 3, line 8; examples 1-8 page 4, line 20 -page 8, line 31 ---	1,9
A	US 5 708 149 A (SCHRYVERS ANTHONY ET AL) 13 January 1998 (1998-01-13) abstract; figure 23 column 5, line 63 -column 6, line 28 --- -/--	1,6
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
15 October 1999		02/11/1999
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Mateo Rosell, A.M.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 99/00307

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SCHRYVERS A B ET AL: "COMPARATIVE ANALYSIS OF THE TRANSFERRIN AND LACTOFERRIN BINDING PROTEINS IN THE FAMILY NEISSERIAEAE" CANADIAN JOURNAL OF MICROBIOLOGY, vol. 35, no. 5, 1 May 1989 (1989-05-01), pages 409-415, XP002020995 ISSN: 0008-4166 cited in the application abstract ---	1
A	RAONG-HUA YU ET AL: "THE INTERACTION BETWEEN HUMAN TRANSFERRIN AND TRANSFERRIN BINDING PROTEIN 2 FROM MORAXELLA (BRANHAMELLA) CATARRHALIS DIFFERS FROM THAT OF OTHER HUMAN PATHOGENS" MICROBIAL PATHOGENESIS, vol. 15, 1 January 1993 (1993-01-01), pages 433-445, XP000612196 ISSN: 0882-4010 abstract ---	1
P,X	MYERS L.E. ET AL., : "The transferrin binding protein B of moraxella catarrhalis elicits bactericidal antibodies and is a potential vaccine antigen" INFECTION AND IMMUNITY, vol. 66, no. 9, 1998, page 4183-4192 XP002118475 the whole document -----	2,7

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 99/00307

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9732980 A	12-09-1997	AU 1865397 A CA 2248095 A CN 1217748 A EP 0885300 A NZ 331777 A	22-09-1997 12-09-1997 26-05-1999 23-12-1998 29-09-1999
WO 9713785 A	17-04-1997	AU 7208296 A CA 2234409 A EP 0866803 A JP 11500744 T	30-04-1997 17-04-1997 30-09-1998 19-01-1999
US 5708149 A	13-01-1998	US 5922562 A US 5922841 A US 5922323 A AU 705998 B AU 8102094 A BR 9408006 A CA 2175332 A WO 9513370 A CN 1141060 A EP 0728200 A JP 9506247 T NZ 275772 A	13-07-1999 13-07-1999 13-07-1999 03-06-1999 29-05-1995 03-12-1996 18-05-1995 18-05-1995 22-01-1997 28-08-1996 24-06-1997 27-04-1999